CLAIMS

I Claim:

1. A method of VoIP load management to assure voice quality in a packet switched network, comprising:

determining a number of VoIP calls currently active in the packet switched network;

determining the maximum number of VoIP calls the packet switched network can facilitate without the loss of voice quality;

allowing the admission of a new VoIP call when the addition of the new VoIP would not exceed the maximum number of VoIP calls; and

blocking the admission of a new VoIP call when the addition of the new VoIP would exceed the maximum number of VoIP calls.

2. The method recited in claim 1, wherein determining the maximum number of VoIP calls the packet can facilitate without the loss of voice quality, further comprises:

determining the bandwidth for a plurality of communications links between a plurality of gateway pools;

determining the number of TRAU frames per packet used to transmit data in the packet switched network; and

generating a capacity table indicating the maximum number of VoIP calls permitted for the plurality of communications links based on the bandwidth of each communications link and the TRAU frames per packet.

3. The method recited in claim 2, further comprising:

accessing the capacity table whenever a new VoIP call requests entry to the packet switched network.

4. The method recited in claim 2, wherein packet switched network further comprises:

a plurality of gateway pools, wherein each gateway pool would have a plurality of communication devices connected to a gateway computer.

5. The method recited in claim 4, wherein the plurality of gateway pools further comprises:

at least one of the plurality of gateway pools having a gateway keeper.

6. The method recited in claim 5, wherein the gateway keeper resolves IP addresses and manages access of VoIP calls to the packet switched network.

7. A computer program embodied on a computer readable medium and executable by a computer for VoIP load management to assure voice quality in a packet switched network, comprising:

determining a number of VoIP calls currently active in the packet switched network;

determining the maximum number of VoIP calls the packet can facilitate without the loss of voice quality;

allowing the admission of a new VoIP call when the addition of the new VoIP would not exceed the maximum number of VoIP calls; and

blocking the admission of a new VoIP call when the addition of the new VoIP would exceed the maximum number of VoIP calls.

8. The computer program recited in claim 7, wherein determining the maximum number of VoIP calls the packet can facilitate without the loss of voice quality, further comprises:

determining the bandwidth for a plurality of communications links between a plurality of gateway pools;

determining the number of TRAU frames per packet used to transmit data in the packet switched network; and

generating a capacity table indicating the maximum number of VoIP calls permitted for the plurality of communications links based on the bandwidth of each communications link and the TRAU frames per packet.

9. The computer program recited in claim 8, further comprising:

accessing the capacity table whenever a new VoIP call requests entry to the packet switched network.

10. The computer program recited in claim 8, wherein packet switched network further comprises:

a plurality of gateway pools, wherein each gateway pool would have a plurality of communication devices connected to a gateway computer.

11. The computer program recited in claim 10, wherein the plurality of gateway pools further comprises:

at least one of the plurality of gateway pools having a gateway keeper.

12. The computer program recited in claim 11, wherein the gateway keeper resolves IP addresses and manages access of VoIP calls to the packet switched network.

13. A method of VoIP load management to assure voice quality in a packet switched network, comprising:

transmitting a ping request to an originating gateway by a gatekeeper;

transmitting a ping IP address to a destination gateway by the originating gateway;

echoing a reply to the originating gateway by the destination gateway;

determining a round trip time for the transmitting and echoing of the reply; and

allowing access of a new VoIP call to the packet switched network when the round trip time is less than a predetermined value.

14. The method recited in claim 13, wherein the round trip time is an average of two round trips to and from the originating gateway and the destination gateway.

15. The method recited in claim 13, wherein the round trip time is a second round trip time of two round trips to and from the originating gateway and the destination gateway.

16. The method recited in claim 15, further comprising:

blocking the new VoIP call when the round trip time exceeds the predetermined value.

17. A computer program embodied on a computer readable medium and executable by a computer program for VoIP load management to assure voice quality in a packet switched network, comprising:

transmitting a ping request to an originating gateway by a gatekeeper;

transmitting a ping IP address to a destination gateway by the originating gateway;

echoing a reply to the originating gateway by the destination gateway;

determining a round trip time for the transmitting and echoing of the reply; and

allowing access of a new VoIP call to the packet switched network when the round trip time is less than a predetermined value.

18. The computer program recited in claim 17, wherein the round trip time is an average of two round trips to and from the originating gateway and the destination gateway.

19. The computer program recited in claim 17, wherein the round trip time is a second round trip time of two round trips to and from the originating gateway and the destination gateway.

20. The computer program recited in claim 19, further comprising:

blocking the new VoIP call when the round trip time exceeds the predetermined value.